Abstract

Title: Comparisons of movements during a baseball swing at pitches from a pitcher or from the pitching machine

Objectives: The aim of the research is analyses of kinematic record of baseball swing and its differences in mechanics while using three distinct variants. Standard live baseball pitching, practice pitching machine, and hitting from the batting tee.

Methods: Conducted research is a case study descriptiveness, in which we gather a large number of data from five individuals. Video of five probands and their execution of hitting approach was created in three different variations. The record from the camera was then evaluated through the use of computer program Dartfish, which is designed for analyses of motor skills. The acquired data was formed using using a one-way analyzes of variance.

Results: When hitting from the batting tee, stage of the leg kick and upper body load is substantially longer, which is caused by absence of variable of moving ball. Therefore players are not limited by timing of the hitting motion directly dependent to a moving ball. When hitting against pitching machine the time of player's load is longer in compare to facing live pitcher, which is in this case caused by the absence of conscious prediction of pitchers motion.

Keywords: baseball, hitting, pitcher, pitching machine, timing